Stereoscopic Previz in the Blender Game Engine

Laurent Boiron, Rémi Ronfard
Action3DS
INRIA/Grenoble(FR)

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About

Me	Research Engineer at INRIA/Grenoble France
My Field	Stereoscopic cinematography, computer graphics
My Lab.	Institute in computer sciences and mathematics
My team	Inovative tools for interactive creation of animated 3D content

Dynamic Stereoscopic Previz *(DSP)*

Previz tool for novice Blender's user offering real-time stereoscopic camera control for virtual shooting.

Virtual Projection Room to view 3D as spectator will see it in cinema

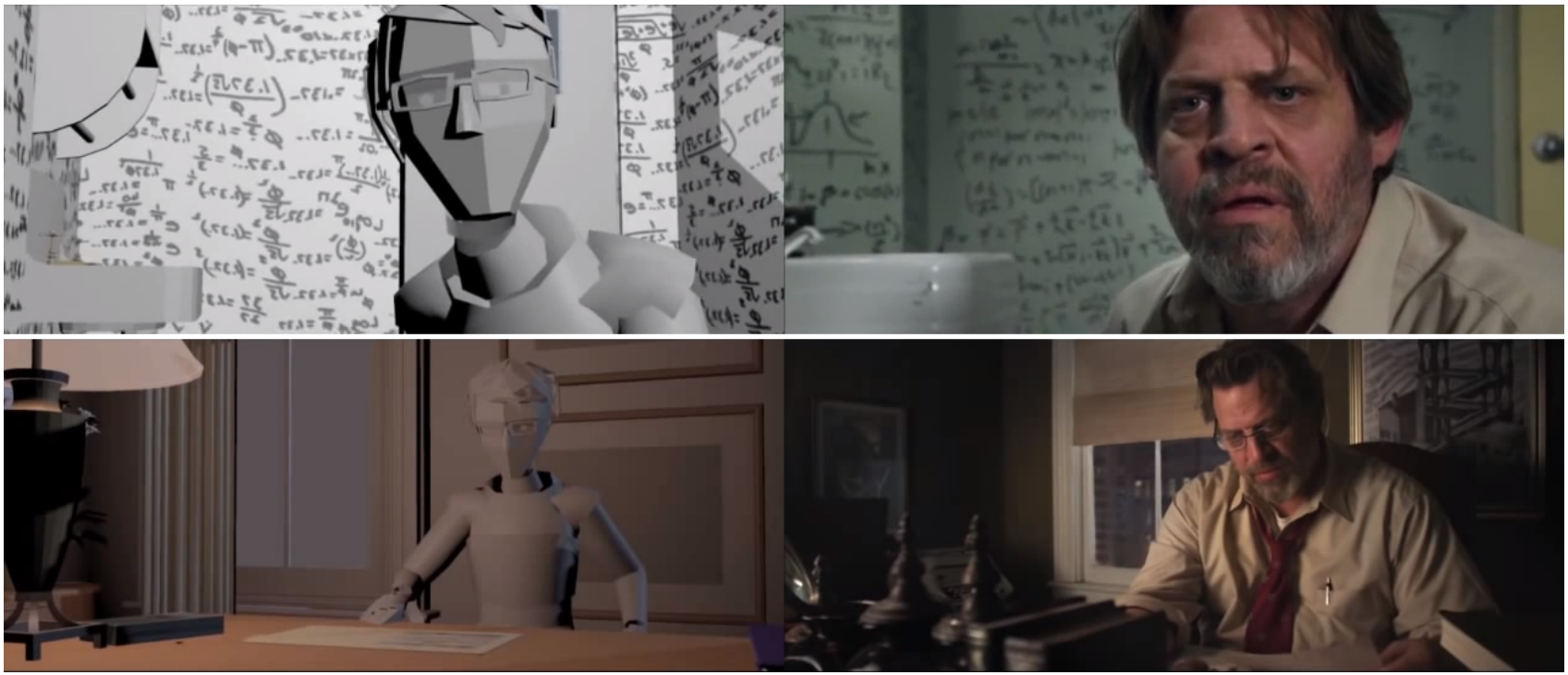
"*It's a game where the goal is to shoot a movie.*"

Shooting a movie is difficult

Previsualisation

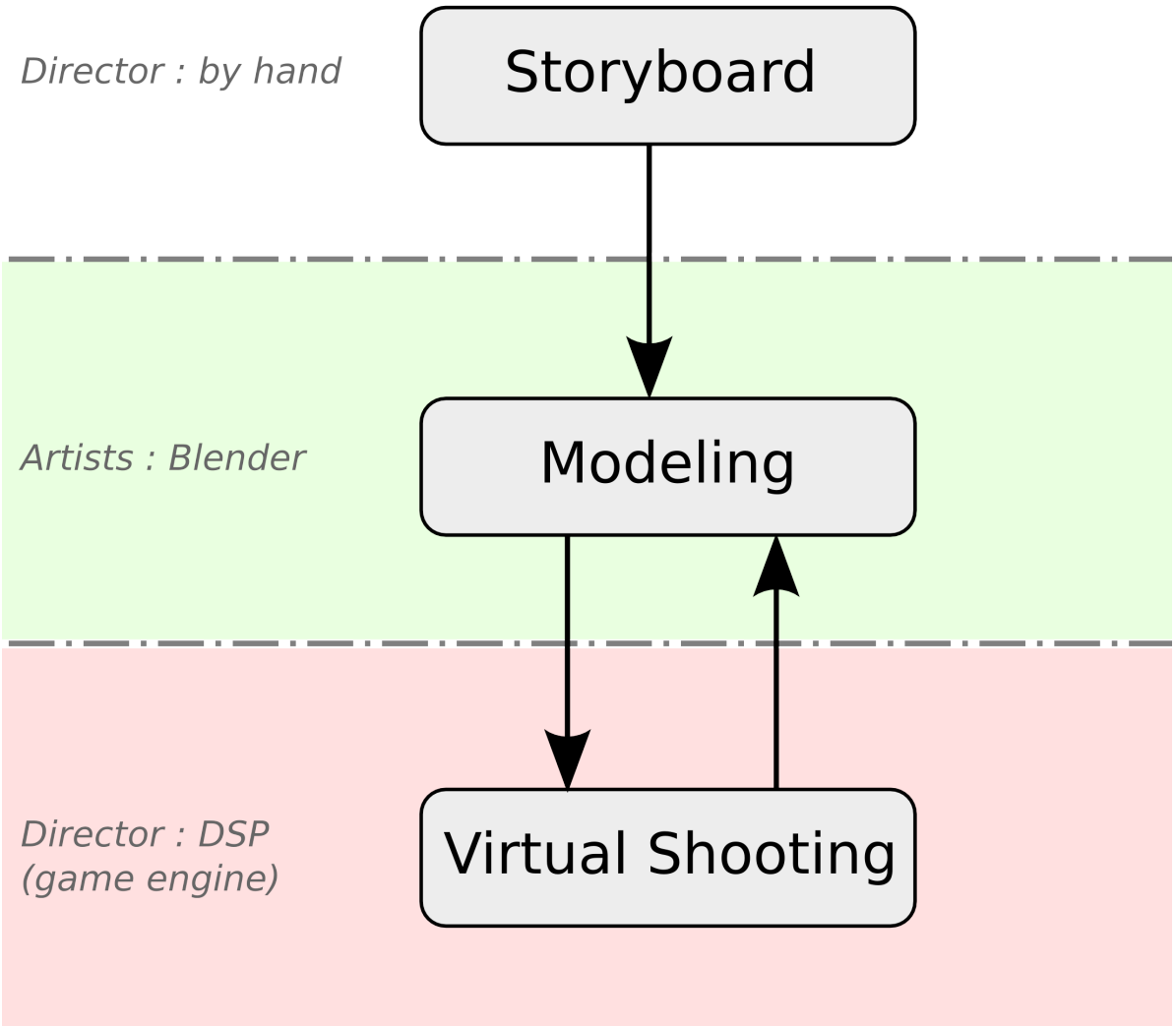
Making a rough computer generated version of a movie

Previz with blender



The secret number - Colin Levy (2012)

How did we proceed



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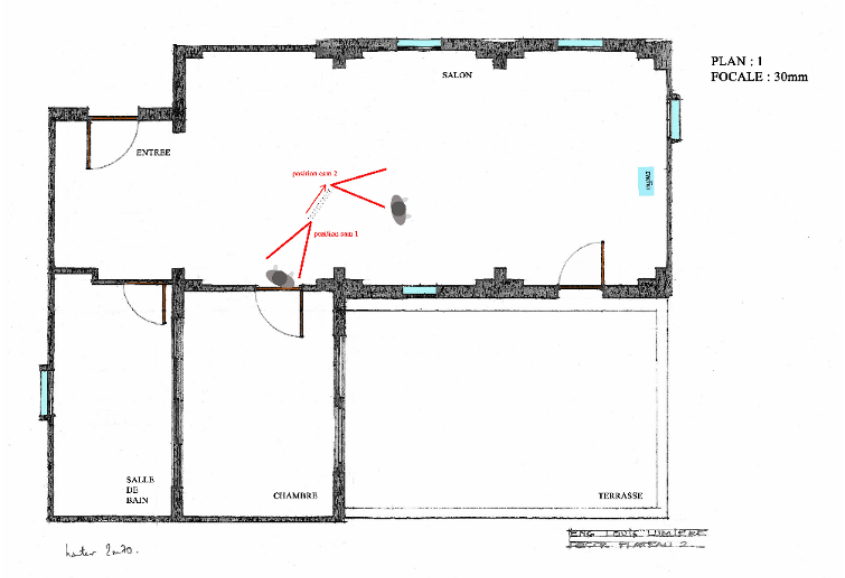

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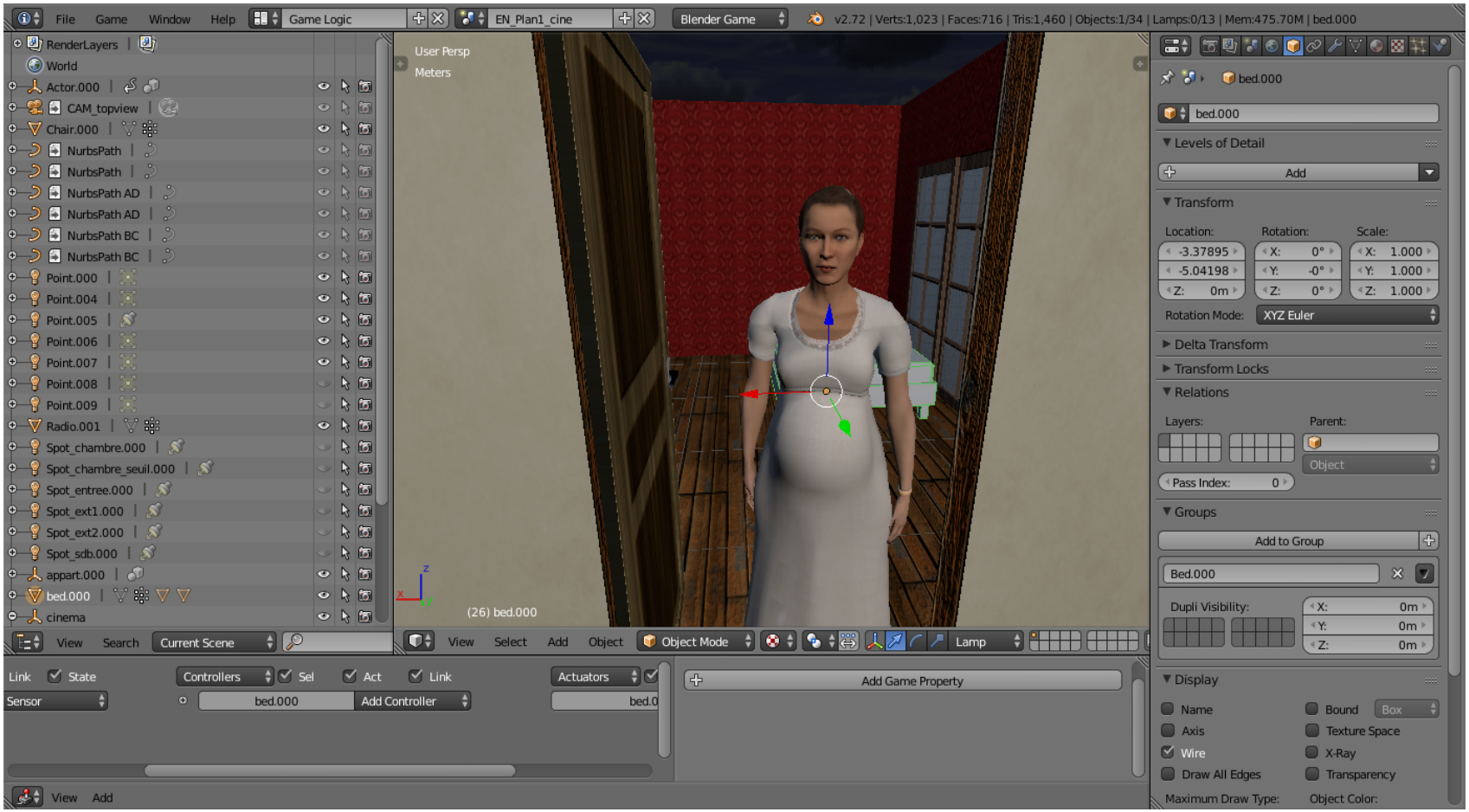

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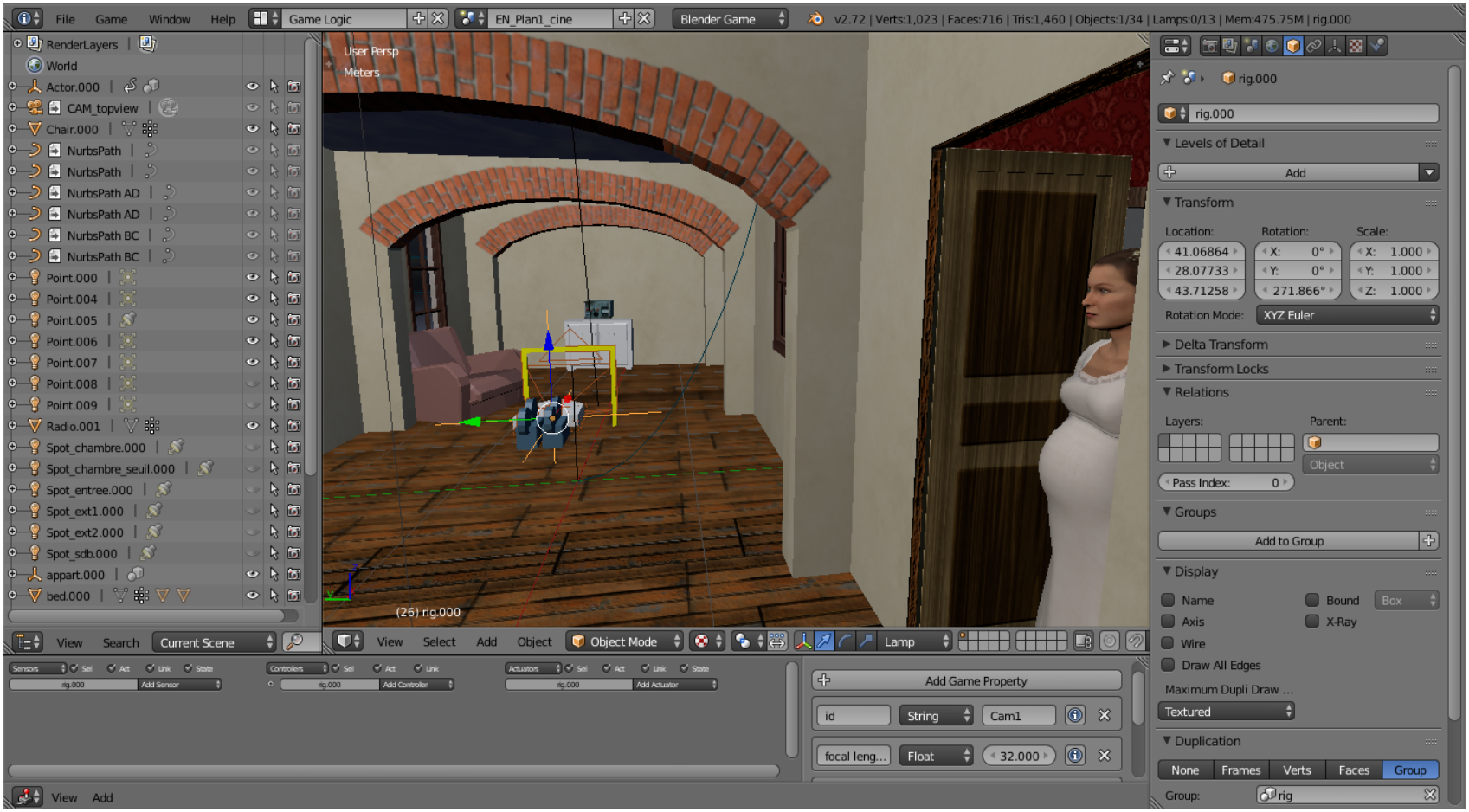


DSP tool

Overview

DSP tool

Overview

DSP Tool

Live

DSP tool

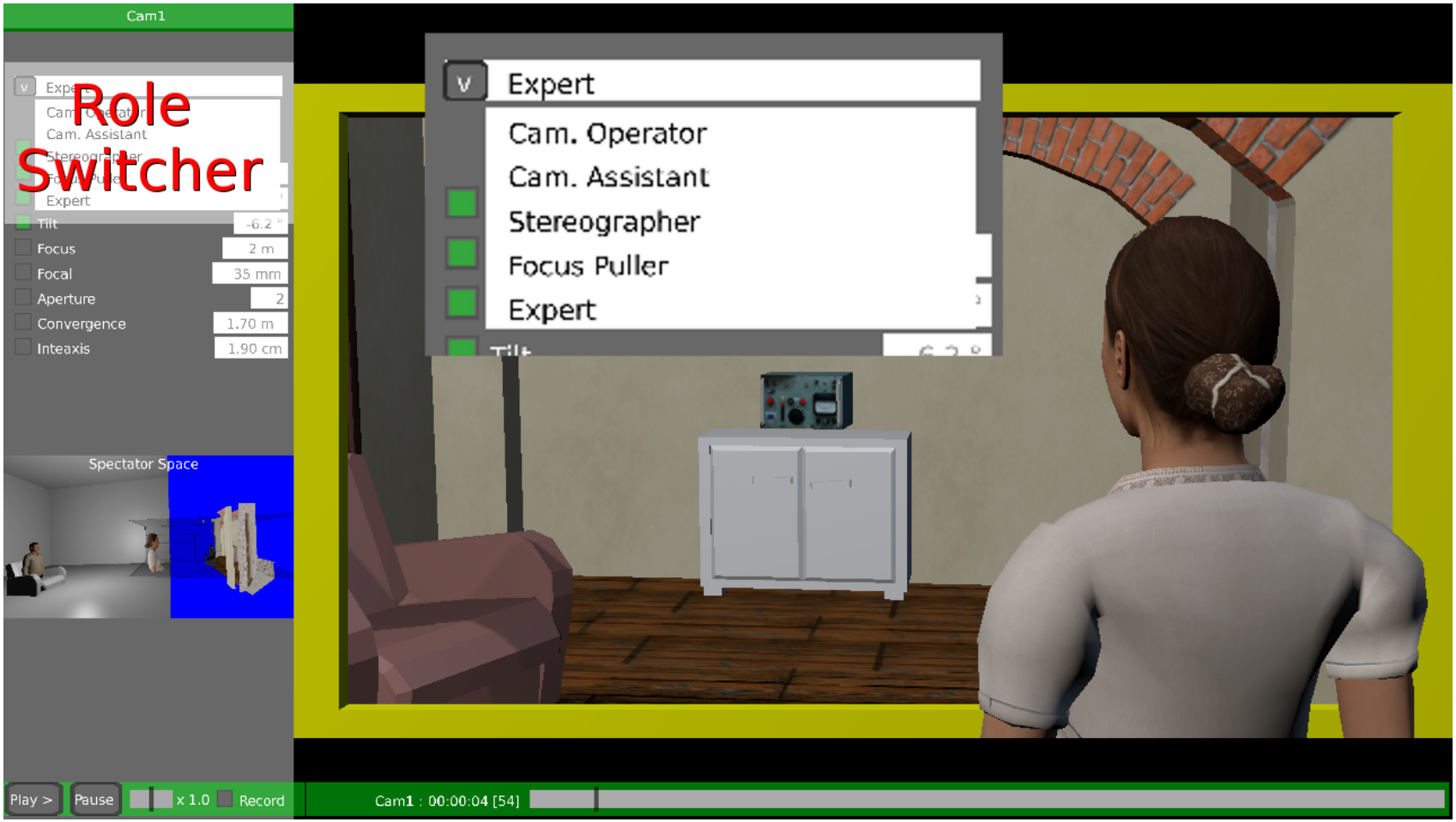
Camera Control

DSP tool

Camera Control

DSP tool

Roles



DSP tool

Recording

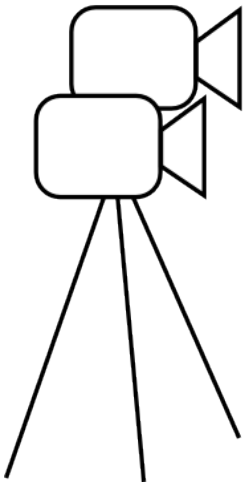
DSP tool

demo

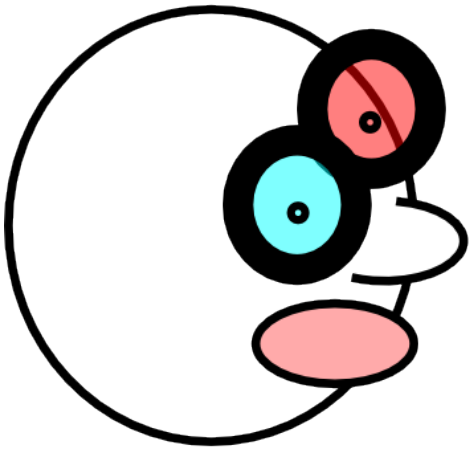
DSP tool

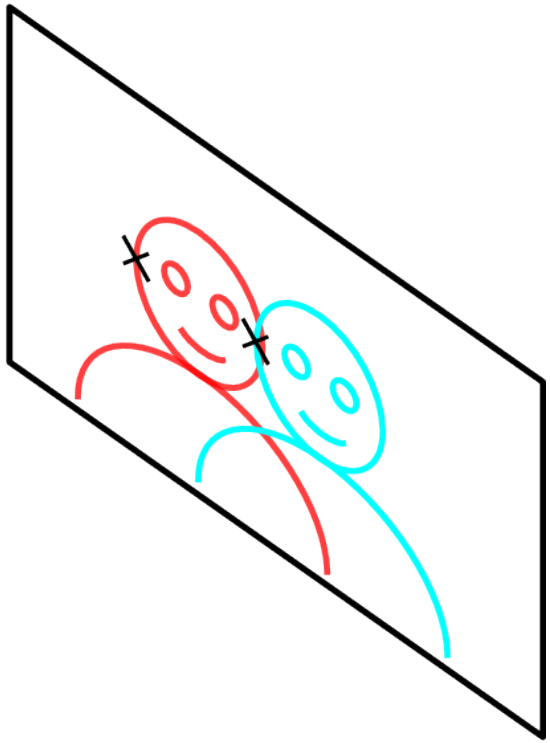
Virtual Projection Room

Basic concepts of Stereoscopy

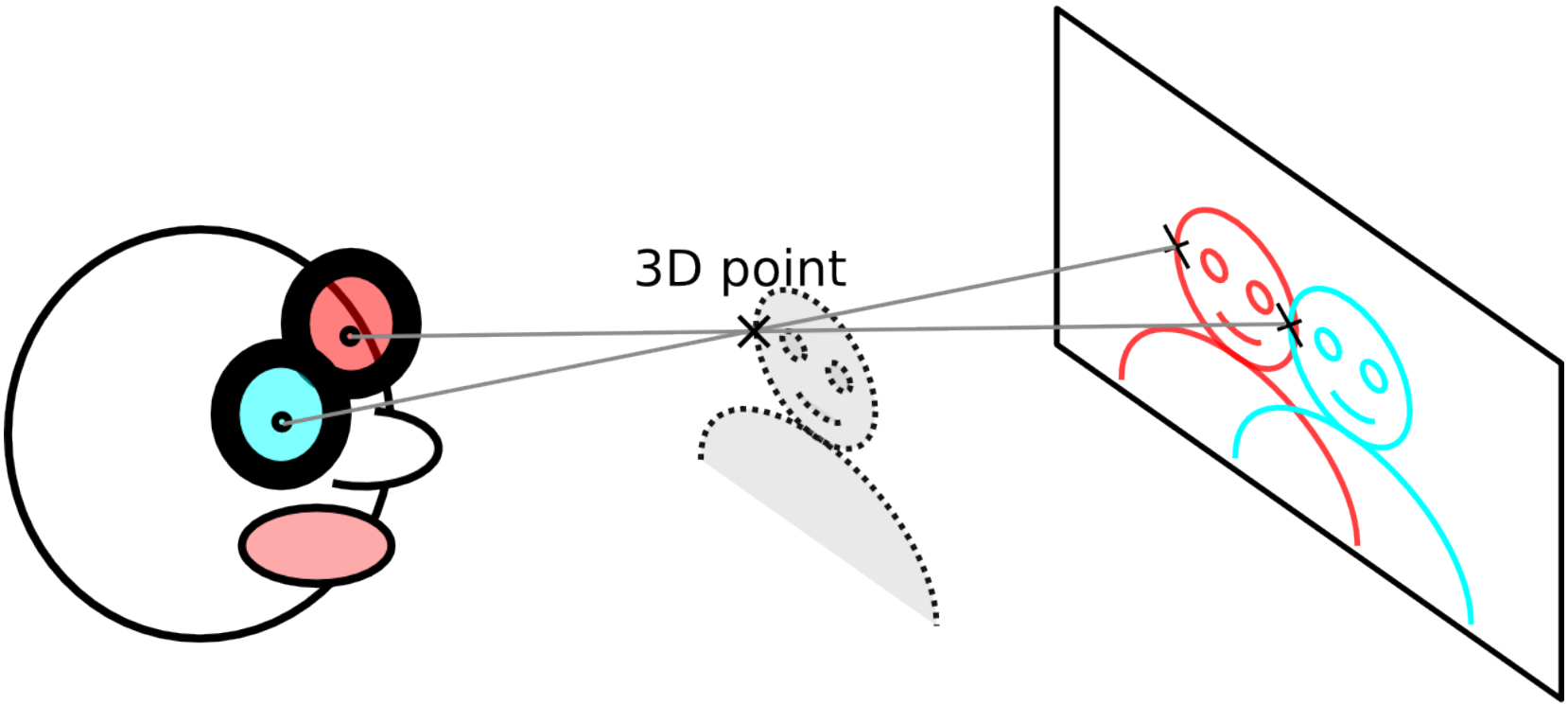


Basic concepts of Stereoscopy

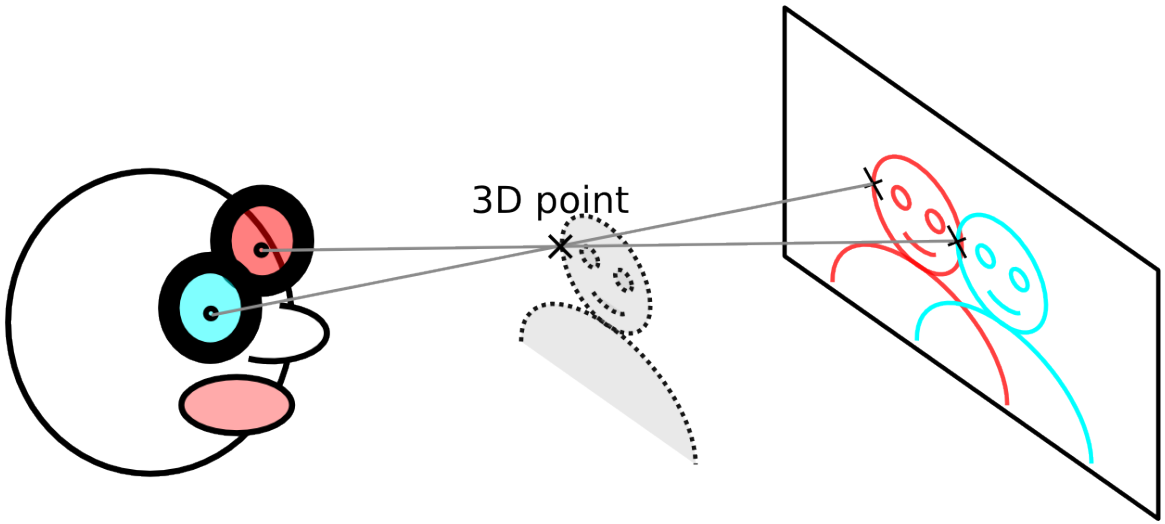




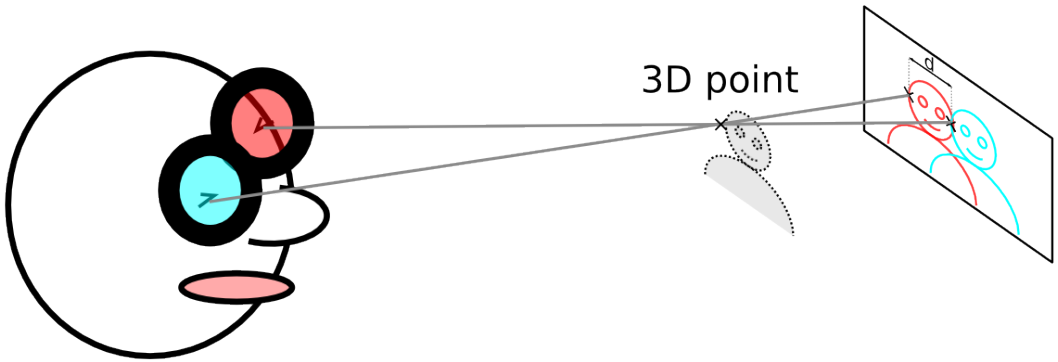
Basic concepts of Stereoscopy



Screen size matters



Screen size matters



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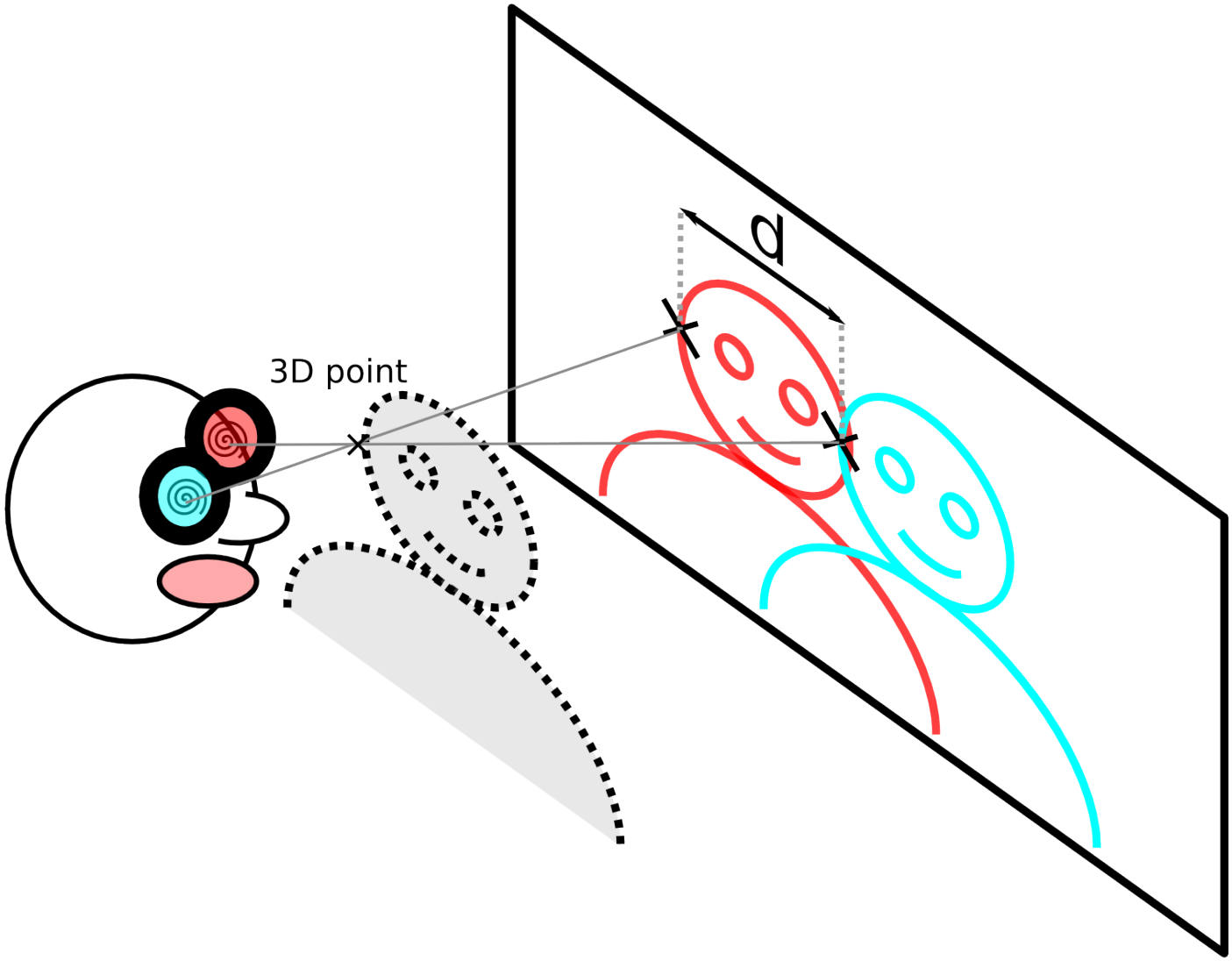


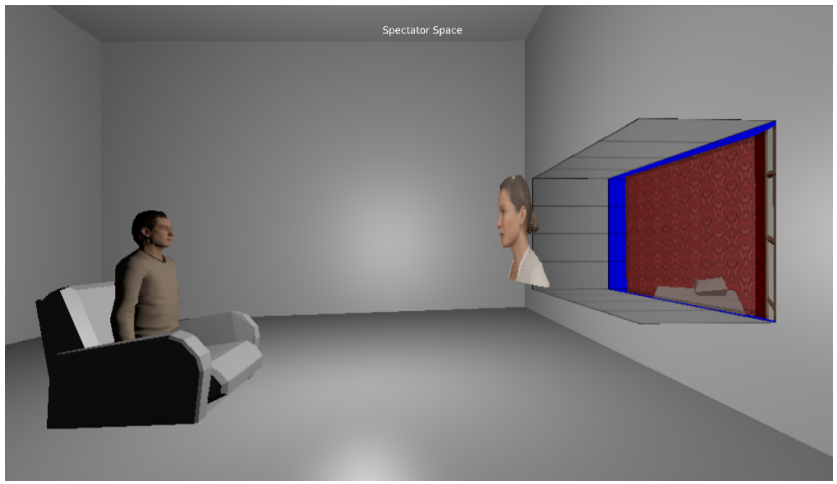
How to do stereoscopic previz ?

How to do stereoscopic previz for cinema on a computer screen ?

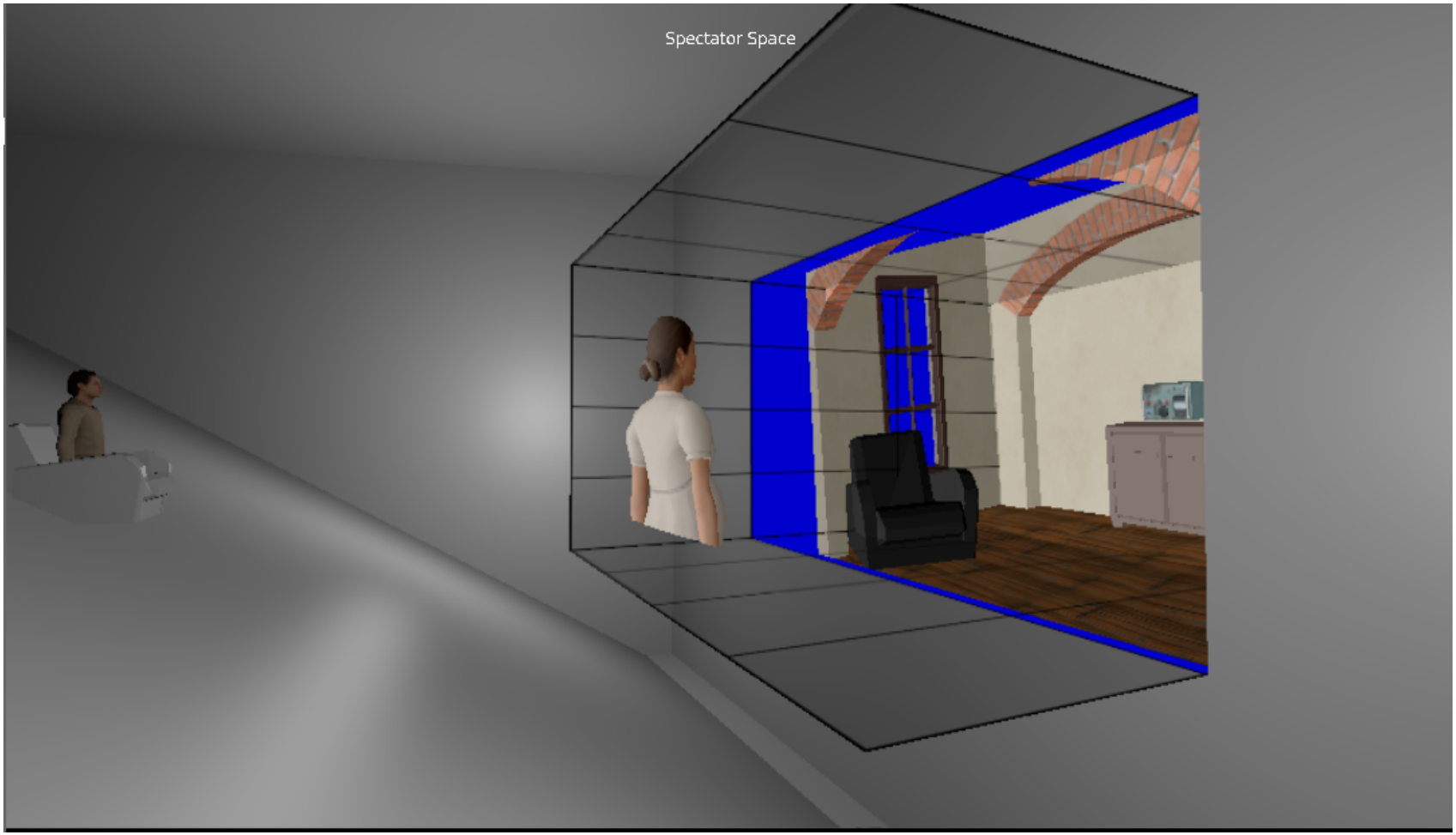
- Cinema screen width : 10 - 20 m
- Computer screen width : 30 - 50cm
- 3D for computer screen $\neq$ 3D for cinema screen !

Virtual Projection Room

Geometric representation of objects into a projection room

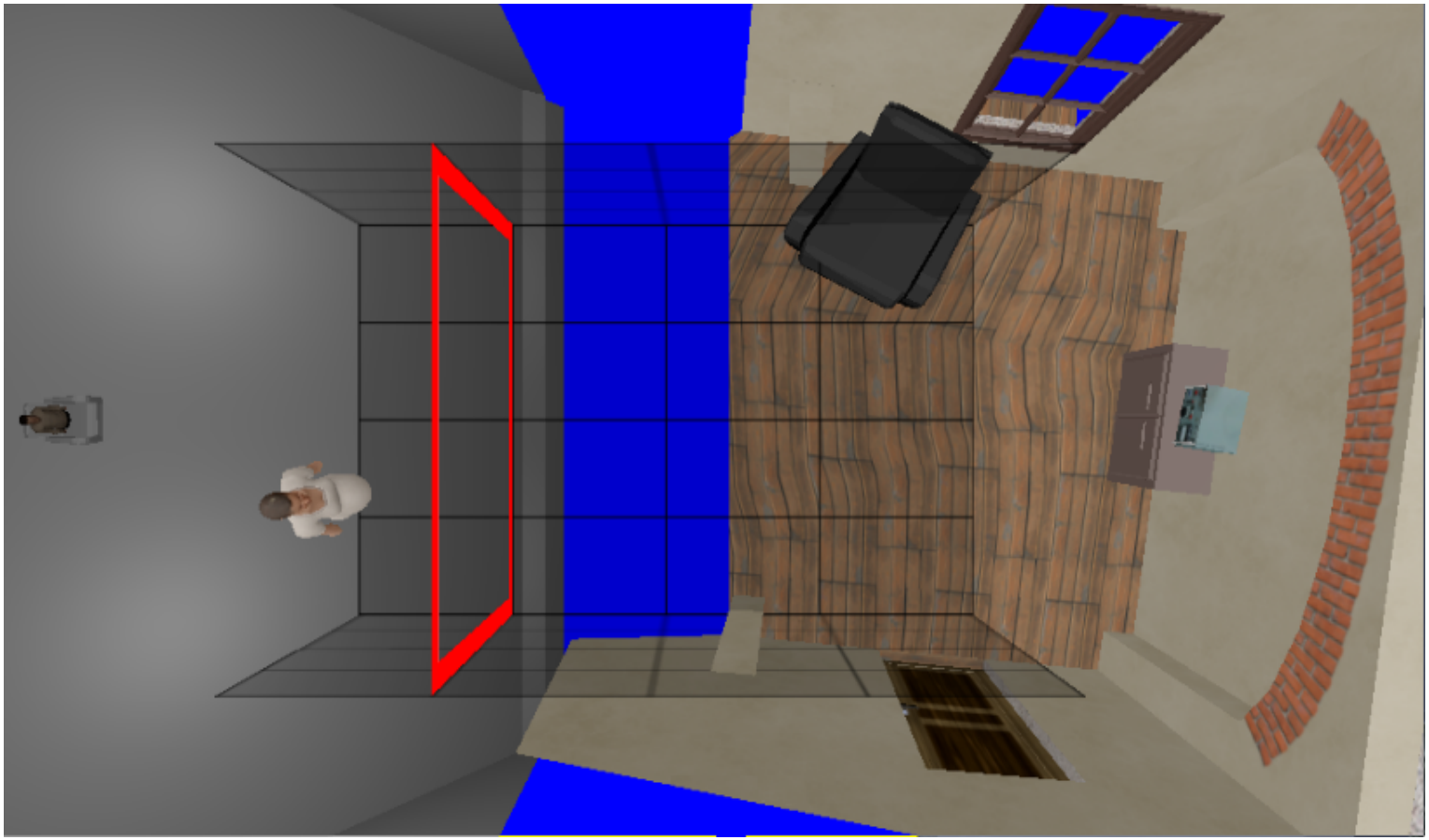


Virtual Projection Room



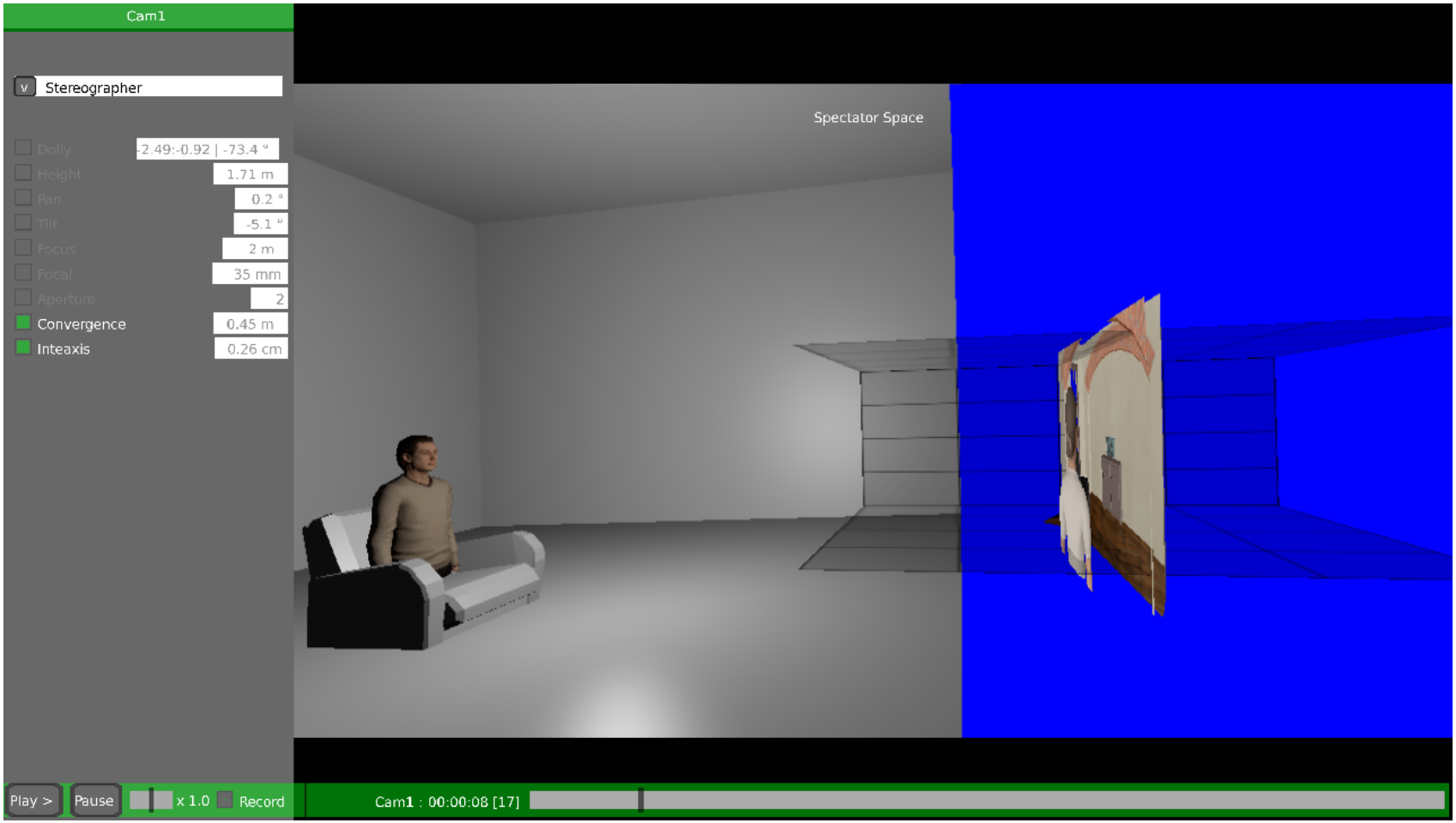
Virtual Projection Room

With the top view the user can easily setup the 3D parameters and avoid well known problems.



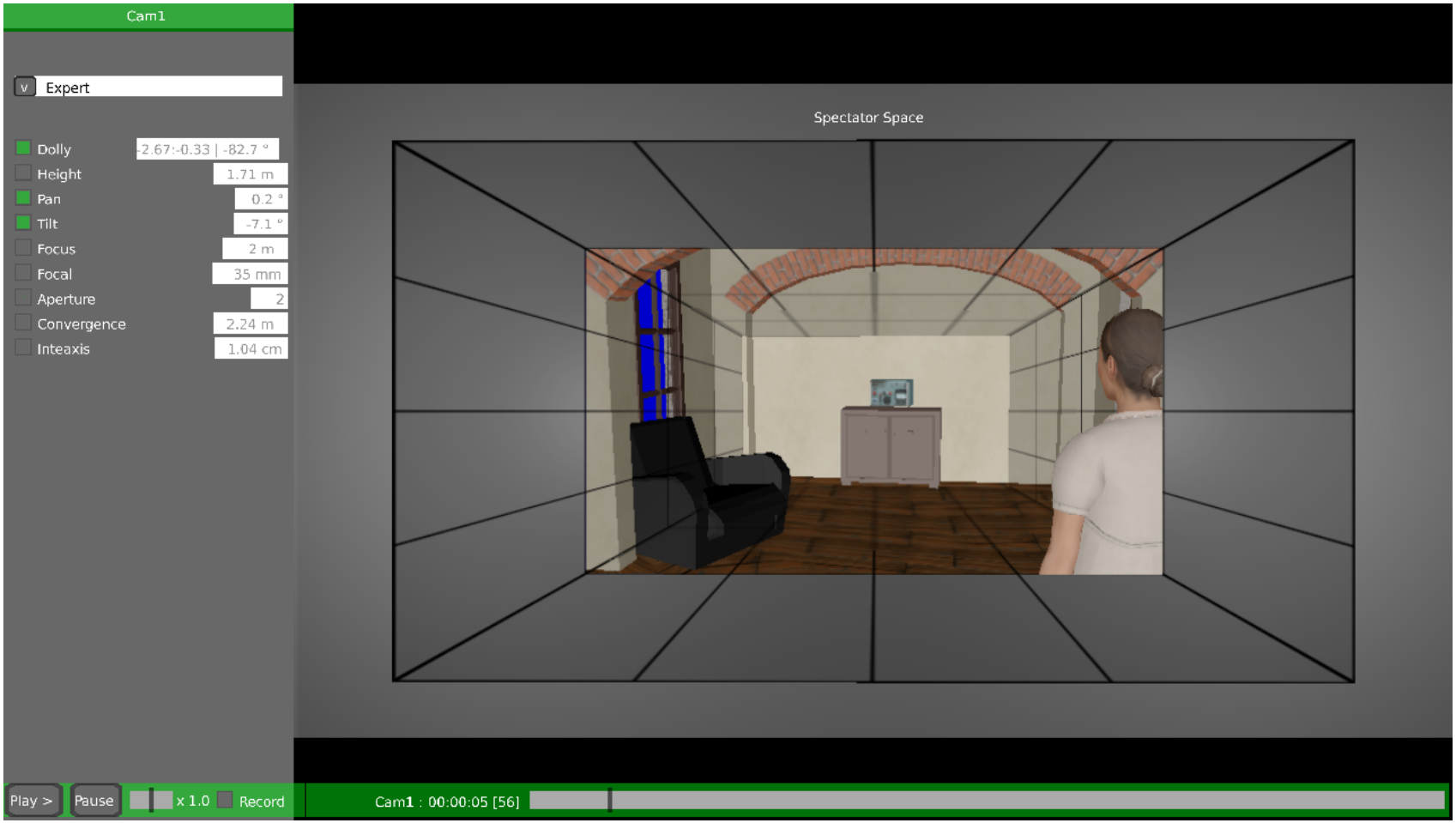
Some examples

Roundness



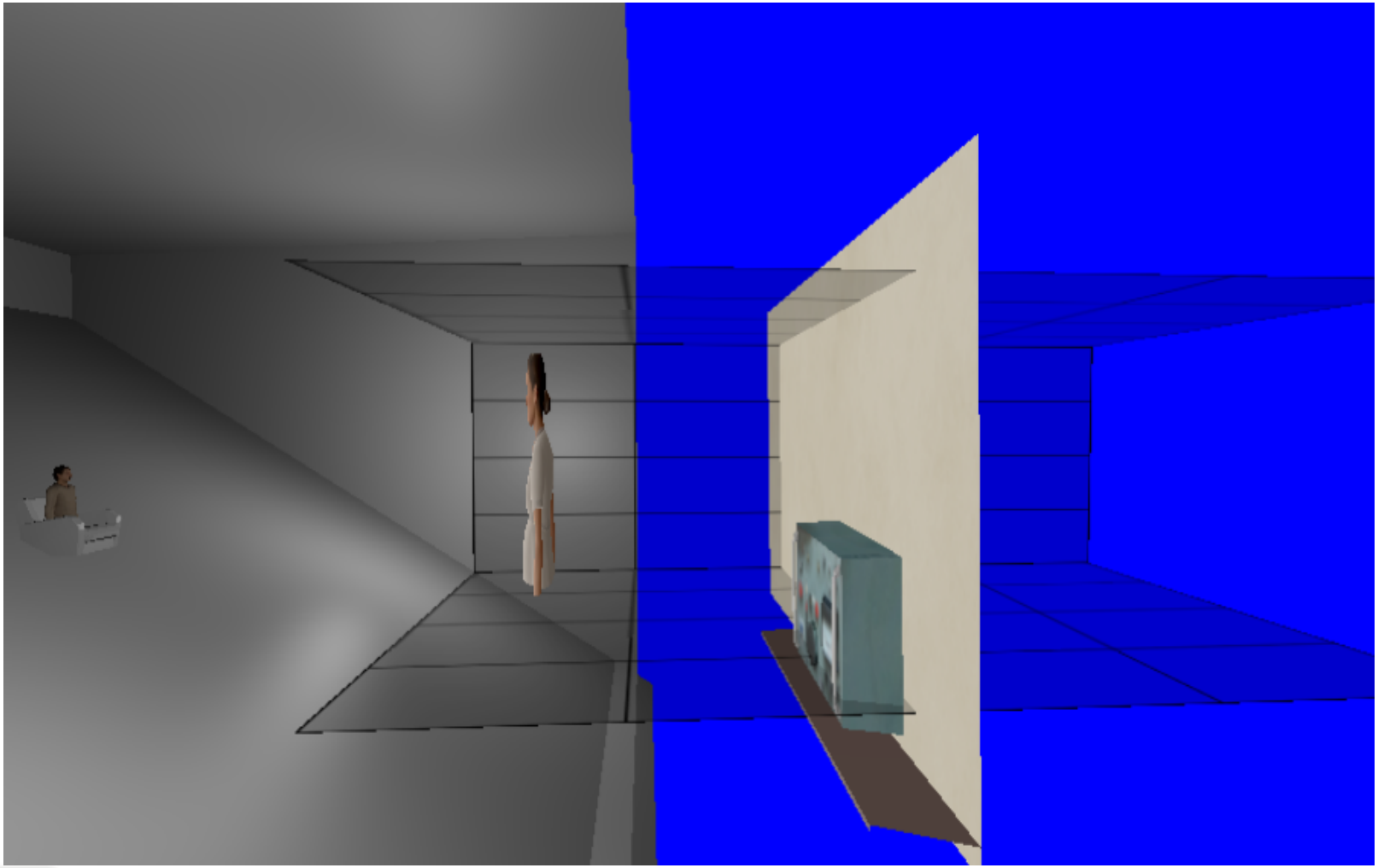
Some examples

Window Violation



Some examples

Cardboard Effect



Some examples

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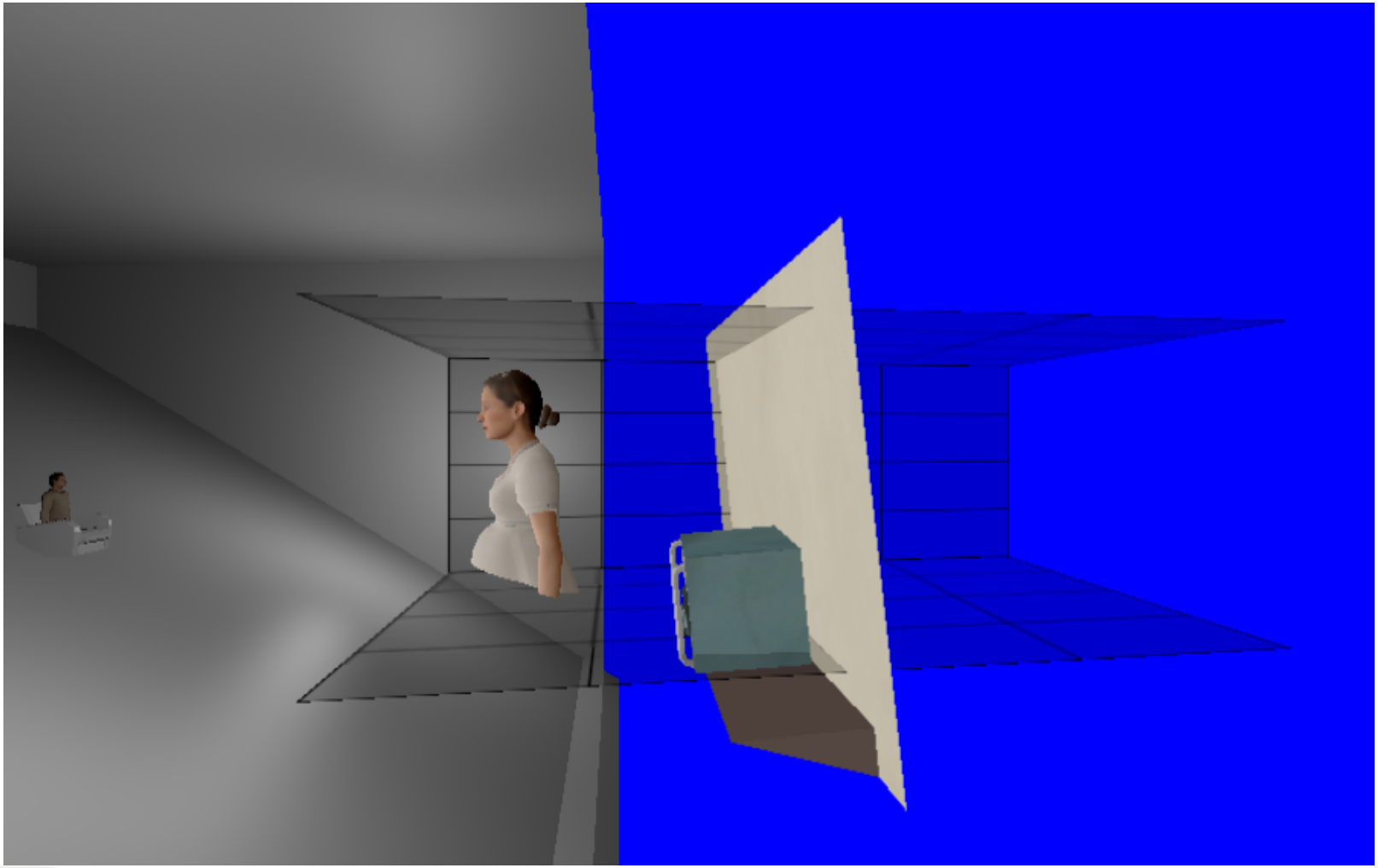

Conclusion

- Previz entirely done with Blender !
- Game Engine + DSP is easy to use for directors
- Very similar than shooting on stage
- Interactions between artists and director are simpler
- Explore potential of 3D movies in the virtual projection room

Thank you for your attention.